



Sequence Listing.ST25.txt

SEQUENCE LISTING

<110> Novartis AG

<120> Selectable Marker Genes

<130> 4-31193A

<160> 10

<170> PatentIn version 3.0

<210> 1

<211> 2607

<212> DNA

<213> homo sapiens

<400> 1

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20

gttgaagaag tggctacttt catgtgtgca gtggaatcct acccccagcc tgagatttcc 1
80

tggactagaa ataaaattct cattaaactc tttgacaccc ggtacagcat ccgggagaat 2
40

ggcagctcc tcaccatctt gagtgtggaa gacagtgtatg atggcattta ctgctgcacg 3
00

gccaacaatg gtgtggagg agctgtggag agttgtggag ccctgcaagt gaagatgaaa 3
60

cctaaaataa ctcgtcctcc cataaatgtg aaaataatag agggattaaa agcagtccta 4
20

ccatgtacta caatggtaa tcccaaaccatc tcagtgtctt ggataaaggag agacagccct 4
80

ctcaggagaaa attcccgaaat tgcagttctt gaatctggaa gcttgaggat tcataacgta 5
40

caaaaggaag atgcaggaca gtatcgatgt gtggcaaaaaa acagcctcgg gacagcatat 6
00

C1

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tccaaagtgg tgaagctgga atttgagggtt tttgccagga tcctgcgggc tcctgaatcc 6
60

cacaatgtca cctttggctc ctttgtgacc ctgcactgta cagcaacagg cattcctgtc 7
20

cccaccatca cctggattga aaacggaaat gctgtttctt ctgggtccat tcaagagagt 7
80

gtgaaagacc gagtgattga ctcaagactg cagctgtta tcaccaagcc aggactctac 8
40

acatgcatacg ctaccaataa gcatggggag aagttcagta ctgccaaggc tgcagccacc 9
00

atcagcatag cagaatggag taaaccacag aaagataaca aaggctactg cgcccagtac 9
60

agaggggagg tgtgtaatgc agtcctggca aaagatgctc ttgttttctt caacacctcc 10
20

tatgcggacc ctgaggaggc ccaagagcta ctggtccaca cggcctggaa tgaactgaaa 10
80

gtagtgagcc cagtctgccg gccagctgct gaggcttgt ttgttaacca catttccag 11
40

gagtgcagtc ctggagtagt gcctactcct attcccattt gcagagagta ctgcttggca 12
00

gtaaaggagc tcttctgcgc aaaagaatgg ctggtaatgg aagagaagac ccacagagga 12
60

ctctacagat ccgagatgca tttgctgtcc gtgc当地at gcagcaagct tccagcatg 13
20

cattgggacc ccacggcctg tgccagactg ccacatctag attataacaa agaaaaccta 13
80

aaaacattcc caccaatgac gtcctcaaag ccaagtgtgg acattccaaa tctgccttcc 14
40

tcctcctctt ctcccttctc tgtctcacct acataactcca tgactgtaat aatctccatc 15
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atgtccagct ttgcaatatt tgtgcttctt accataacta ctctctattg ctgccgaaga 15
60

C1

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agaaaacaat ggaaaaataa gaaaagagaa tcagcagcag taaccctcac cacactgct 16
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tctgagctct tactagatag acttcatccc aaccccatgt accagaggat gccgctcctt 16
80

ctgaacccca aattgctcag cctggagttat ccaaggaata acattgaata tgtgagagac 17
40

atcggagagg gagcgtttgg aagggtgttt caagcaaggg caccaggctt acttccctat 18
00

gaacctttca ctatggtggc agtaaagatg ctcaaagaag aagcctcggc agatatgcaa 18
60

gcggactttc agagggaggc agccctcatg gcagaatttg acaaccctaa cattgtgaag 19
20

ctattaggag tgtgtgctgt cgggaagcca atgtgcctgc tcttgaata catggcctat 19
80

ggtgacctca atgagttcct ccgcagcatg tcccctcaca ccgtgtgcag cctcagtcac 20
40

agtgacttgt ctatgagggc tcaggtctcc agccctgggc ccccacccct ctctgtgct 21
00

gagcagctt gcattgccag gcaggtggca gctggcatgg cttacctctc agaacgtaag 21
60

tttggcacc gagat tagc caccaggaac tgcctgggtgg gcgagaacat ggtggtaaaa 22
20

attgccgact ttggcctctc caggaacatc tactcagcag actactacaa agcta atgaa 22
80

aacgacgcta tccctatccg ttggatgccca ccagagtcca tttttataa ccgctacact 23
40

acagagtctg atgtgtgggc ctatggcgtg gtcctctggg agatcttctc ctatggcctg 24
00

cagccctact atgggatggc ccatgaggag gtcatttact acgtgcgaga tggcaacatc 24
60

ctctcctgcc ctgagaactg ccccggtggag ctgtacaatc tcatgcgtct atgttggagc 25
20

C1

Sequence Listing.ST25.txt

aagctgcctg cagacagacc cagttcacc agtattcacc gaattctgga acgcatgtgt 25
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gagagggcag aggaaactgt gagtgta 26
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<210> 2
<211> 869
<212> PRT
<213> homo sapiens

<400> 2

Met Arg Glu Leu Val Asn Ile Pro Leu Val His Ile Leu Thr Leu Val
1 5 10 15

Ala Phe Ser Gly Thr Glu Lys Leu Pro Lys Ala Pro Val Ile Thr Thr
20 25 30

Pro Leu Glu Thr Val Asp Ala Leu Val Glu Val Ala Thr Phe Met
35 40 45

Cys Ala Val Glu Ser Tyr Pro Gln Pro Glu Ile Ser Trp Thr Arg Asn
50 55 60

Lys Ile Leu Ile Lys Leu Phe Asp Thr Arg Tyr Ser Ile Arg Glu Asn
65 70 75 80

Gly Gln Leu Leu Thr Ile Leu Ser Val Glu Asp Ser Asp Asp Gly Ile
85 90 95

Tyr Cys Cys Thr Ala Asn Asn Gly Val Gly Gly Ala Val Glu Ser Cys
100 105 110

Gly Ala Leu Gln Val Lys Met Lys Pro Lys Ile Thr Arg Pro Pro Ile
115 120 125

Asn Val Lys Ile Ile Glu Gly Leu Lys Ala Val Leu Pro Cys Thr Thr
130 135 140

Met Gly Asn Pro Lys Pro Ser Val Ser Trp Ile Lys Gly Asp Ser Pro
145 150 155 160

Leu Arg Glu Asn Ser Arg Ile Ala Val Leu Glu Ser Gly Ser Leu Arg
165 170 175

Ile His Asn Val Gln Lys Glu Asp Ala Gly Gln Tyr Arg Cys Val Ala

C1

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180

185

190

Lys Asn Ser Leu Gly Thr Ala Tyr Ser Lys Val Val Lys Leu Glu Phe
195 200 205

Glu Val Phe Ala Arg Ile Leu Arg Ala Pro Glu Ser His Asn Val Thr
210 215 220

Phe Gly Ser Phe Val Thr Leu His Cys Thr Ala Thr Gly Ile Pro Val
225 230 235 240

Pro Thr Ile Thr Trp Ile Glu Asn Gly Asn Ala Val Ser Ser Gly Ser
245 250 255

Ile Gln Glu Ser Val Lys Asp Arg Val Ile Asp Ser Arg Leu Gln Leu
260 265 270

Phe Ile Thr Lys Pro Gly Leu Tyr Thr Cys Ile Ala Thr Asn Lys His
275 280 285

Gly Glu Lys Phe Ser Thr Ala Lys Ala Ala Ala Thr Ile Ser Ile Ala
290 295 300

Glu Trp Ser Lys Pro Gln Lys Asp Asn Lys Gly Tyr Cys Ala Gln Tyr
305 310 315 320

Arg Gly Glu Val Cys Asn Ala Val Leu Ala Lys Asp Ala Leu Val Phe
325 330 335

Leu Asn Thr Ser Tyr Ala Asp Pro Glu Glu Ala Gln Glu Leu Leu Val
340 345 350

His Thr Ala Trp Asn Glu Leu Lys Val Val Ser Pro Val Cys Arg Pro
355 360 365

Ala Ala Glu Ala Leu Leu Cys Asn His Ile Phe Gln Glu Cys Ser Pro
370 375 380

Gly Val Val Pro Thr Pro Ile Pro Ile Cys Arg Glu Tyr Cys Leu Ala
385 390 395 400

Val Lys Glu Leu Phe Cys Ala Lys Glu Trp Leu Val Met Glu Glu Lys
405 410 415

Thr His Arg Gly Leu Tyr Arg Ser Glu Met His Leu Leu Ser Val Pro
420 425 430

Lys Cys Ser Lys Leu Pro Ser Met His Trp Asp Pro Thr Ala Cys Ala
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435

440

445

Arg Leu Pro His Leu Asp Tyr Asn Lys Glu Asn Leu Lys Thr Phe Pro
 450 455 460

Pro Met Thr Ser Ser Lys Pro Ser Val Asp Ile Pro Asn Leu Pro Ser
 465 470 475 480

Ser Ser Ser Ser Phe Ser Val Ser Pro Thr Tyr Ser Met Thr Val
 485 490 495

Ile Ile Ser Ile Met Ser Ser Phe Ala Ile Phe Val Leu Leu Thr Ile
 500 505 510

Thr Thr Leu Tyr Cys Cys Arg Arg Lys Gln Trp Lys Asn Lys Lys
 515 520 525

Arg Glu Ser Ala Ala Val Thr Leu Thr Thr Leu Pro Ser Glu Leu Leu
 530 535 540

Leu Asp Arg Leu His Pro Asn Pro Met Tyr Gln Arg Met Pro Leu Leu
 545 550 555 560

Leu Asn Pro Lys Leu Leu Ser Leu Glu Tyr Pro Arg Asn Asn Ile Glu
 565 570 575

Tyr Val Arg Asp Ile Gly Glu Gly Ala Phe Gly Arg Val Phe Gln Ala
 580 585 590

Arg Ala Pro Gly Leu Leu Pro Tyr Glu Pro Phe Thr Met Val Ala Val
 595 600 605

Lys Met Leu Lys Glu Glu Ala Ser Ala Asp Met Gln Ala Asp Phe Gln
 610 615 620

Arg Glu Ala Ala Leu Met Ala Glu Phe Asp Asn Pro Asn Ile Val Lys
 625 630 635 640

Leu Leu Gly Val Cys Ala Val Gly Lys Pro Met Cys Leu Leu Phe Glu
 645 650 655

Tyr Met Ala Tyr Gly Asp Leu Asn Glu Phe Leu Arg Ser Met Ser Pro
 660 665 670

His Thr Val Cys Ser Leu Ser His Ser Asp Leu Ser Met Arg Ala Gln
 675 680 685

Val Ser Ser Pro Gly Pro Pro Leu Ser Cys Ala Glu Gln Leu Cys

C1

Sequence Listing.ST25.txt
690 695 700

Ile Ala Arg Gln Val Ala Ala Gly Met Ala Tyr Leu Ser Glu Arg Lys
705 710 715 720

Phe Val His Arg Asp Leu Ala Thr Arg Asn Cys Leu Val Gly Glu Asn
725 730 735

Met Val Val Lys Ile Ala Asp Phe Gly Leu Ser Arg Asn Ile Tyr Ser
740 745 750

Ala Asp Tyr Tyr Lys Ala Asn Glu Asn Asp Ala Ile Pro Ile Arg Trp
755 760 765

Met Pro Pro Glu Ser Ile Phe Tyr Asn Arg Tyr Thr Thr Glu Ser Asp
770 775 780

Val Trp Ala Tyr Gly Val Val Leu Trp Glu Ile Phe Ser Tyr Gly Leu
785 790 795 800

Gln Pro Tyr Tyr Gly Met Ala His Glu Glu Val Ile Tyr Tyr Val Arg
805 810 815

Asp Gly Asn Ile Leu Ser Cys Pro Glu Asn Cys Pro Val Glu Leu Tyr
820 825 830

Asn Leu Met Arg Leu Cys Trp Ser Lys Leu Pro Ala Asp Arg Pro Ser
835 840 845

Phe Thr Ser Ile His Arg Ile Leu Glu Arg Met Cys Glu Arg Ala Glu
850 855 860

Gly Thr Val Ser Val
865

<210> 3
<211> 20
<212> DNA
<213> homo sapiens

<400> 3
cagaaggAAC ttcgtcctgc
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<210> 4
<211> 20
<212> DNA

C1

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<213> homo sapiens

<400> 4

acatgcgttc cagaattcgg
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<210> 5

<211> 42

<212> DNA

<213> homo sapiens

<400> 5

cgaggcctgt cttcaacctt agacactcac agttccctct gc
42

<210> 6

<211> 27

<212> DNA

<213> homo sapiens

<400> 6

cggcctgtgc cagactgcca catctag
27

<210> 7

<211> 31

<212> DNA

<213> homo sapiens

<400> 7

cgtctaggtg agggtactgc tgctgattct c
31

<210> 8

<211> 38

<212> DNA

<213> homo sapiens

<400> 8

ggttaaccct attcaatgtt attccttgga tactccag
38

<210> 9

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<211> 24
<212> DNA
<213> homo sapiens

<400> 9
cttccaaaag ctcctgtcat cacc
24

<210> 10
<211> 26
<212> DNA
<213> homo sapiens

<400> 10
ccagtcatgg agtatgtagg tgagac
26
